





5' TGGGTCCTCCTTATTACAGG -177
 TGAGTCACACCCTGAAACACAGGCTCTCTTCCTGTGAGGACTGAGTCAGGTAGAAGAGTCGATAAAACCACTGATCAAGGAAAAG -91
 GAAGGCACAGCGGAGCGCAGAGTGAGAACTCCAGCGCGGAGGCGCCGGGCAGCGACCCCTGCAGCGCGGACCGCGCGCCGCTGGCC -1
 ATGCCTGCGCTCTGGCTGAGCTGCTACCTCTGCTTCTCGCTCCTCTGCCCCAGCCCCGAGGAGGAGTCTGTGATTGC 90
 M P A L W L S C Y L C F S L L L P A A  A T S G R  E V C D C 30
 AACGGGAAGTCCAGGCAATGCATCTTTGACCAGGAACCTCACAAACAGACAGGAAATGGATTCCGCTGCCTCAACTGCAATGACAACACT 180
 N G K S R Q C I F D Q E L H K Q T G N G F R C L N C N D N T 60
 GATGGCATCCACTGCGAGAGGTGCAAGGCAGGATTTTACCGACAGAGAGAAAGGGACCGCTGTTTACCCTGCAATTGTAACCTCTAAAGGT 270
 D G I H C E R C K A G F Y R Q R E R D R C L P C N C N S K G 90
 TCTCTTAGCGCTCGATGTGACAACTCTGGACGGTGCAGCTGTAAAGCCAGGTGTGACAGGAGACAGGTGTGACCGATGTCTGCCCCGCTTC 360
 S L S A R C D N S G R C S C K P G V T G D R C D R C L P G F 120
 CACACACTCACTGATGTGGGTGCGCCCAAGACCAAAGGCTGTAGACTCCAAGTGTGACTGTGACCCAGCTGGCATCTCAGGGCCCTGT 450
 H T L T D A G C A Q D Q R L L D S K C D C D P A G I S G P C 150
 GACTCAGGCGCTGTGTCTGCAAGCCGGCTGTCACTGGAGAGCGCTGTGATAGGTGTGACCAAGGTTACTATCACCTGGATGGGGGAAAC 540
 D S G R C V C K P A V T G E R C D R C R P G Y Y H L D G G N 180
 CCTCAGGGCTGTACCCAGTGTCTTTTGCTATGGGCATTCCGCCAGCTGCCACAGCTCTGGGGACTACAGTGTCCATAAAATCATCTCTGCC 630
 P Q G C T Q C F C Y G H S A  S C H S S G D Y S V H K I I S A 210
 TTCCATCAAGATGTTGATGGCTGGAAGGCTGTCCAAAGAAACGGGTCTCCTGCAAAGCTCCAGTGGTCACAGCGCCATCGGGATATATTT 720
 F H Q D V D G W K A V Q R N G S P A K L Q W S Q R H R D I F 240
 AGCTCAGCACGACGATCAGACCCTGTCTATTTTGTAGCTCCTGCCAAATTTCTTGGGAATCAACAGGTGAGCTACGGGCAAAGCCTATCT 810
 S S A R R S D P V Y F V A P A K F L G N Q Q V S Y G Q S L S 270
 TTTGACTACCGTGTGGATAGGGGAGGCAGACACCCATCTGCCATGACGTGATCCTGGAAGGTGCTGGTCTACGGATCACAGCTCCCTTG 900
 F D Y R V D R G G R H P S A H D V I L E G A G L R I T A P L 300
 ATGCCACTTAGCAAGACACTGCCTTGTGGGATCACCAAGACTTACACATTAGATTAAATGAACATCCAAGCAGTAATTGGAGCCCCCAG 990
 M P L S K T L P C G I T K T Y T F R L N E H P S S N W S P Q 330
 CTAAGTTACTTTGAGTATCGGAGGTTACTGCGGAACCTCACAGCCCTGCGGATCCGAGCTACCTACGGAGAATACAGTACTGGGTACATT 1080
 L S Y F E Y R R L L R N L T A L R I R A T Y G E Y S T G Y I 360
 GACAACGTGACCTTGATTTAGCCCGCCCGTTTCTGGAGCCCCAGCGCCCTGGGTGGAACAATGTGTATGCCCTGTTGGCTACAAGGGG 1170
 D N V T L I S A R P V S G A P A P W V E  C V C P V G Y K G 390
 CAGTTCTGCCAGGATTGTGCTTCCGGCTACAAAAGAGATTACAGCCAGACTGGGACCTTTTGGCACCTGTATTCCATGTAAGTCCAAGGG 1260
 Q F C Q D C A S G Y K R D S A R L G P F G T C I P C N C Q G 420
 GGAGGGCCTGCGATCCAGACACAGGAGACTGTTACTCAGGGGATGAGAACCCTGCATCCCTGAGTGTGCTGACTGCCCCATTGGTTTC 1350
 G G A C D P D T G D C Y S G D E N P D I P E C A D C P I G F 450
 TACAACGATCCACAAGACCCCGCAGCTGCAAGCCGTGCCCCTGTGCAATGGGTTAGCTGCTCCGTGATGCCTGAGACAGAGGAGGTG 1440
 Y N D P Q D P R S C K P C P C R N G F S C S V M P E T E E V 480
 GTGTGCAATAACTGCCCCAGGGTGTCACTGGTGGCCGCTGTGAGCTCTGTGCTGATGGCTATTTTGGGGACCCCTTCGGGGAACGTGGC 1530
 V C N N C P Q G V T G A R C E L C A D G Y F G D P F G E R G 510
 CCAGTGAGGCTTGTGAGCCCTGTGAGTGAACAACAACGTGGACCCCTAGTGCCTCCGGGAACGTGTGACCGCCTGACAGGCAGGTGTCTG 1620
 P V R P C Q P C Q C N N N V D P S A S G N C D R L T G R C L 540
 AAGTGCATCCACAACAGCTGGGGTCCACTGTGACCAAGCAGGCTACTATGGGGACCCGTTGGCTCCCAATCCAGCAGACAAG 1710
 K C I H N T A G V H C D Q C K A G Y Y G D P L A P N P A D K 570
 TGTGAGCTTGCAACTGCAACCCAGTGGGCTCGGAGCCTGTGGAGTGTGCAAGTGTGAGCAGCTGTGTTTGCAAGCCAGGCTTTGGTGGC 1800
 C R A C N C N P V G S E P V E C R S D G S C V C K P G F G G 600

FIG. 3A

CTCAGCTGTGAGCATGCGGCACTGACCAGCTGTCCAGCTTGCTATAATCAAGTGAAGGTTGATGGATCAGTTTATGCAGCAGCTCCAG 1890
 L S C E H A A L T S C P A C Y N Q V K V Q M D Q F M Q Q L Q 630
 ATCCTGGAGGCCCTGATTTGGAAGGCTCAGGGTGGAGCAGTACCCAACGCAGAGCTGGAAGGCAGGATGCAGCAGGCTGAGCAGGCCCTT 1980
 I L E A L I S K A Q G G A V P N A E L E G R M Q Q A E Q A L 660
 CGGGACATTCTGAGAGAAGCCAGATTTCAAGATGCTGTTAGATCCTTCAATCTCCGGGTGGCCAAGGCAAGGACTCAAGAGAATAGC 2070
 R D I L R E A Q I S Q D A V R S F N L R V A K A R T Q E N S 690
 TACCGGGACCGCTGGATGACCTCAAGATGACTGTGGAAGAGTTGCGGGCCCTGGGCAGTCAGTATCAGAACCAAGTTGAGGATACTCGC 2160
 Y R D R L D D L K M T V E R V R A L G S Q Y Q N Q V Q D T R 730
 AGGCTCATCACTCAGATGCGCCTGAGCCTGGAGGAAAGTGAGGCTTCCCTGCAAAACACCAACATTCCTCCTTCAGAGCACTACGTGGGG 2250
 R L I T Q M R L S L E E S E A S L Q N T N I P P S E H Y V G 750
 CCAATGGCTTTAAAGTCTGGCTCAGGAGGCCACGAGATTGGCAGACAGCCATGTTGAGTCAGCCAGTAACATGGAGCAACTGGCAAAG 2340
 P N G F K S L A Q E A T R L A D S H V Q S A S N M E Q L A K 780
 GAAACCCAGGAGTATTCAAAGAGCTGATGTCACTGGTGCAGGAGGCTGTCAGGAAGGAGGCGGAAGCGGCAGCCTGGACGGAGCCGTG 2430
 E T Q E Y S K E L M S L V R E A L Q E G G G S G S L D G A V 810
 GTGCAAAGGCTTGTGGGAAAATTGCAGAAAATAAATCTCTGGCCAGGAGTTGTGAGGGAGGCCACGCAAACCGACATGGAAGCAGAT 2520
 V Q R L V G K L Q K T K S L A Q E L S R E A T Q T D M E A D 840
 AGGTCTTATCAGCATAGTCTCCACCTTCTCAATCCGTGTCTCAGATTGAGGAGTCAATGATCAGTCTTGCAGGTAGAAGCGAAGAGG 2610
 R S Y Q H S L H L L N S V S Q I Q G V N D Q S L Q V E A K R 870
 CTCAGACAAAAAGCTGATTCTCTCTCAAACCGTGTGACTAAGCATATGGATGAGTTCAAGCAGTGCAGCAAGCAATCTGGGAACTGGGAA 2700
 L R Q K A D S L S N R V T K H M D E F K H V Q S N L G N W E 900
 GAAGAAACCGGCAGCTCTTACAGAATGGAAGAATGGGAGACAGACATCAGATCAGCTGCTTCCCGTGCCAACTTGCTAAAAGCAGA 2790
 E E T R Q L L Q N G K N G R Q T S D Q L L S R A N L A K S R 930
 GCCCAAGAAGCACTAAGTATGGGCAATGCCACTTTTATGAAGTTGAGAATCTTAAAGAATCTCAGAGAGTTGACCTGCAGGTTGGA 2880
 A Q E A L S M G N A T F Y E V E N I L K N L R E F D L Q V G 960
 GATAAAGAGCAGAAGCTGAAGAGGCCATGAAGAGACTCTCCTACATCAGCCAGAAGGTTGACAGGTGCCAGTGACAAGCAAGCAAGCA 2970
 D K R A E A E E A M K R L S Y I S Q K V A G A S D K T K Q A 990
 GAAGCAGCCCTGGGCGAGTGTGCTGCCGACGCCAGAGGGCAAAGAATGCAGCCAGGGAGGCCCTGGAGATCTCTGGCAAGATAGAACAG 3060
 E A A L G S A A A D A Q R A K N A A R E A L E I S G K I E Q 1020
 GAGATAGGAGGTCTGAACTTGAAGCCAATGTGACAGCAGATGGAGCCTTGGCCATGGAGAAGGGACTGGCCACTCTGAAAAGTGAGATG 3150
 E I G G L N L E A N V T A D G A L A M E K G L A T L K S E M 1050
 AGAGAAGTGAAGGAGAGCTGTCAAGGAAGGAGCAGGAGTTTGACATGGATATGGACGAGTGAGATGGTAATTGCAGAGGCCCAAAGA 3240
 R E V E G E L S R K E Q E F D M D M D A V Q M V I A E A Q R 1080
 GTTGAAAACAGAGCCAAGAATGCTGGAGTTACGATCCAAGACACACTCAACACATTGGATGGCATCCTACACCTAATAGACCAGCCTGGC 3330
 V E N R A K N A G V T I Q D T L N T L D G I L H L I D Q P G 1110
 AGTGTGGATGAAGAGAGGCTGATCTTACTGGAGCAGAAGCTTTTCCGAGCCAAGACTCAGATCAACAGCCAGCTACGGCCCTTGATGTCA 3420
 S V D E E R L I L L E Q K L F R A K T Q I N S Q L R P L M S 1140
 GAGCTGGAAGAGAGGGCACATCGGCAGAGGGCCACCTCCGTTTCTGGAGACTAGCATAGATGGGATTCTGGCTGATGTGAAGAACCCTG 3510
 E L E E R A H R Q K G H L R F L E T S I D G I L A D V K N L 1170
 GAGAACATCAGGGACAACCTGCCCCGGGCTGTACAAATACCCAGGCTCTTGAGCAACAGtgagctgccttagagatttctcaaccaag 3600
 E N I R D N L P P G C Y N T Q A L E Q Q * 1190
 gttcttgggattcagacctagctgccttagagatttctcaaccaaggttcttgggattcagacctcagggtcaggagcccgatgcggg 3690
 tggggtgggatgggaatatttgaatatgttgatgcgtgtgctcaggccccagtgaaactgatcccatccctgagacctcggccagataa 3780
 atgtctttattg 3789-3'

FIG. 3B

horse	1	MPALWLSVLCFSLLLPAARATSGREVCDNCNGKSRQCIFDQELHKQTNGFRCLNCNDNTDGIHCERCKAGFYRQRERDRCLPCNCNSKGSLSARCDNSG
man	1	MPALWLGCCCLFSLLLPAARATSRREVCDNCNGKSRQCIFDRELHRTGTNGFRCLNCNDNTDGIHCECKNGFYRHRERDRCLPCNCNSKGSLSARCDNSG
mouse	1	MPALWLSCCCLGVALLLPASQATSRREVCDNCNGKSRQCIFDQELHRQAGSFRCLNCNDNTAGVHCERSREGFYQHQSRSRCLPCNCNSKGSLSAGCDNSG
horse	101	RCSCKPGVTGDRCDRCLPGFHTLTDAGCAQDQRLDLSKCDPAGISGPCDSGRVCVKCPAVTGERCDRCRPGVYHLDGGNPQGCTQCFCYGHASCHSSG
man	101	RCSCKPGVTGDRCDRCLPGFHTLTDAGCTQDQRLDLSKCDPAGIAPGPCDAGRCVCKPAVTGERCDRCRSGYNNLDGNGPEGCTQCFCYGHASCHSSA
mouse	101	QCRCKPGVTGQRCDQCQCPGFHMLTDAGCTRDQGLDLSKCDPAGISGPCDSGRVCVKCPAVTGERCDRCRPRDYLDRANPEGCTQCFCYGHASCHASA
horse	201	DYSVHKIISAFHQDVGDGKAWQRNGSPAKLQWSQRHRDIFSSARRSDPVYFVAPAKFLGNQVSYGQSLSDYRDRGGRHPSAHDVILEGAGLRITAPL
man	201	EYSVHKITSTFHQDVGDGKAWQRNGSPAKLQWSQRHQDVSSAQRRLDPVYFVAPAKFLGNQVSYGQSLSDYRDRGGRHPSAHDVILEGAGLRITAPL
mouse	201	DFSVHKITSTFSQDVGDGKAWQRNGAPAKLHWSQRHRDVFSSARRSDPVYFVAPAKFLGNQVSYGQSLSDYRDRGGRGPSAYDVILEGAGLRITAPL
horse	301	MPLSKTLP CGITKTYTFRLNEHPSNWSQLSYFEYRRLRLNLTA LR-IRATYGEYSTGYIDNVTLISARPVSGAPWVEQCVPVGYKGQFCQDCASG
man	301	MPLGKTLPCGLTKTYTFRLNEHPSNWSQLSYFEYRRLRLNLTA LR-IRATYGEYSTGYIDNVTLISARPVSGAPWVEQCICPVGYKGQFCQDCASG
mouse	301	MAPGKTLPCGITKTYTFRLNEHPSHWSQLSYFEYRRLRLNLTA LLMIRATYGEYSTGYIDNVTLVSARPVLGAPAPWVERCVCLLGYKGQFCQECASG
horse	400	YKRDSARLGPFGTCIPNCQCGGACDPDTGDCYSGDENPDIPEDACDPIGFYNDPQDRSCCKPCPCRNFGSCSVMPETEEVVCNNCPQGVGTGARCELCA
man	400	YKRDSARLGPFGTCIPNCQCGGACDPDTGDCYSGDENPDIECADCPIGFYNDPDPDRSCCKPCPCRNFGSCSVMPETEEVVCNNCPPGVGTGARCELCA
mouse	401	YKRDSARLGAFCACVPCNCQEGACDPDTGDCYSGDENPDIECADCPIGFYNDPDPDRSCCKPCPCRNFGSCSVMPETEEVVCNNCPPGVGTGARCELCA
horse	500	GYFGDPFGERGVPVPCQPCQCNNDVPSASGNCDRLTGRCLKCIHNTAGVHCDQCKAGYYGDPPLANPADKCRACNCNPVSEPVCECRSDGSCVCKPGFG
man	499	GYFGDPFGEHGPVPCQPCQCNNDVPSASGNCDRLTGRCLKCIHNTAGIYCDQCKAGYFGDPLANPADKCRACNCNPMGSEPVGCRSDGTCVCKPGFG
mouse	500	GFFGDPFGEHGPVPCQPCQCNNDVPSASGNCQDLTGRCLKCIYNTAGVYCDQCKAGYFGDPLANPADKCRACNCSPMGAEPGECRGDSCVCKPGFG
horse	600	GLSCEHAALTSCPACYNQVQVMDQFMQQLQILEALISKAQGG---AVPNAELEGRMQQAQALRDILREAQISQDAVRSFNLRVAKARTQENSRYDRDL
man	599	GPNCHEGAFS-CPACYNQVQIQMDQFMQQLQRMELISKAQGGDG-VVPDTELEGRMQQAQALQDILDAQISEGASRLGLQAKVRSQENSYSQRLD
mouse	600	AFNCDHAALTSCPACYNQVQIQMDQFTQQLQSLQALVSKAQGGGGGTVPVQLEGRIEQAQALQDILGEAQISEGAMRAVAVRLAKARSQENDYKTRLD
horse	697	DLKMTVERVRALGSQYQNVQDTRRLITQMRSLSESEASLQNTNIPPSEHYVGPNGFKSLAQEA TRLDASHVQSASNMELQAKETQEYSKELMSLVREA
man	697	DLKMTVERVRALGSQYQNVVRDTHRLITQMRSLSESEASLQNTIPASDHYVGPNGFKSLAQEA TRLAESHVESASNMELQAKETQEDYSKQALSVRKA
mouse	700	DLKMTAERIRALGSQHQN RVQDTSRLISQMRSLSLAGSEALLENTNIHSEHYVGPNDPFKSLAQEA TRKADSHAESANAMKQLARETEDYSKQALSARKL
horse	797	LQE---GGSGSLDGA VVQRLVGKQLQTKSLAQELSREATQTDMEADRSYQHSLLHLLNSVSQIQGVNDQSLQVEAKR-LRQKADSLSNRVTKHMDFEKHVQ
man	797	LHEGVGSGSPDGA VVQGLVEKLEKTKSLAQQLTREATQAEIEADRSYQHSLLHLLDSVSRLOQVSDQSFQVEEAKRIKQKADSLTLVTRHMDFEKRTQ
mouse	800	LSG---GGSGSGWDSSVVQGLMGKLEKTKSLSQQLSLEGTQADIEADRSYQHSLLHLLDSASQLQGVSDLSFQVEAKR-IRQKADSLSNLVTRQTDATFTRV
horse	894	SNLGNWBEETRQLLQNGKNGRQTSDDLSTRANLAKSRAQEAALSMGNA TFYEVENILKNLREFDLQVGDKRAEAEAMKRLSYISQKVAGASDKTKQAEAA
man	897	KNLGNWKEEAQQLLQNGKSGREKSDQLSTRANLAKSRAQEAALSMGNA TFYEVESEILKNLREFDLQVGNRKAEEAMKRLSYISQKVSDASDKTQQAERA
mouse	897	NNLGNWEKETRQLLQTKDRRQTSDDLSTRANLAKNRAQEAALSMGNA TFYEVENILKNLREFDLQVEDRKAEEAMKRLSSISQKVADASDKTQQAETA
horse	994	LGSAADAQRAKNAAREALIEISKIEIGGLNLEANVTADGALAMEKGLATLKSEMREVEGELSKEQEFDMMDA VQMVIAEAQRVENRAKNAGVTIQ
man	997	LGSAADAQRAKNGAGEALEISSEIEIGSLNLEANVTADGALAMEKGLASLKSEMREVEGELERKELEFDTNMDA VQMVITEAQKVDTRAKNAGVTIQ
mouse	997	LGSAATDQRAKNAAREALIEISSEIEIGSLNLEANVTADGALAMEKGTATLKSEMREMI-ELARKELEFDTKDVTQLVITEAQQAADARATSAGVTIQ
horse	1094	DTLNTLDGILHLIDQPGSVDEERLILILEQKLFRAKTQINSOLRPLMSELEERAHROKGHRLFLFLETSIDGILADVKNLENIRDNLP PGCYNTQALEEQ
man	1097	DTLNTLDGILHLMDQPLSVDEEGLVLEEQKLSRAKTQINSOLRPLMSELEERARQQRGHLHLLFLETSIDGILADVKNLENIRDNLP PGCYNTQALEEQ
mouse	1096	DTLNTLDGILHLIDQPGSVDEEGMMLLEQGLFQAKTQINSRLRPLMSDLEERVRRQRNHLHLLFLETSIDGILADVKNLENIRDNLP PGCYNTQALEEQ

FIG. 4

5'TGGGTCCTCCTTATTACAGG -177
 TGAGTCACACCCTGAAACACAGGCTCTCTCCTGTCAGGACTGAGTCAGGTAGAAGAGTCGATAAAACACCTGATCAAGGAAAAG -91
 GAAGGCACAGCGGAGCGCAGAGTGAGAACTCCAGCGGCGAGGCGCCGGGCAGCGACCCCTGCAGCGGCGGACCGCGCCGGCCTGGCC -1
 ATGCCTGCGCTCTGGCTGAGCTGCTACCTCTGCTTCTCGCTCCTCTGCCCGCAGCCCGGGCCACCTCCGGGAGGGAAGTCTGTGATTGC 90
 M P A L W L S C Y L C F S L L L P A A R A T S G R E V C D C 30
 AACGGGAAGTCCAGGCAATGCATCTTTGACCAGGAATTCACAAACAGACAGGAAATGGATTCCGCTGCCTCAACTGCAATGACAACACT 180
 N G K S R Q C I F D Q E L H K Q T G N G F R C L N C N D N T 60
 GATGGCATCCACTGCGAGAGGTGCAAGGCAGGATTTTACCGACAGAGAGAAAGGGACCGCTGTTTACCCTGCAATTGTAACCTCTAAAGGT 270
 D G I H C E R C K A G F Y R Q R E R D R C L P C N C N S K G 90
 TCTCTTAGCGCTCGATGTGACAACTCTGGACGGTGCAGCTGTAAAGCCAGGTGTGACAGGAGACAGGTGTGACCGATGTCTGCCCGGCTTC 360
 S L S A R C D N S G R C S C K P G V T G D R C D R C L P G F 120
 CACACACTCACTGATGTGGGTGCGCCCAAGACCAAAGGCTGCTAGACTCCAAGTGTGACTGTGACCCAGCTGGCATCTCAGGGCCCTGT 450
 H T L T D A G C A Q D Q R L L D S K C D C D P A G I S G P C 150
 GACTCAGGCCGCTGTGTCTGCAAGCCGGCTGTCACTGGAGAGCGCTGTGATAGGTGTGACCCAGGTACTATCACCTGGATGGGGGAAAC 540
 D S G R C V C K P A V T G E R C D R C R P G Y Y H L D G G N 180
 CCTCAGGGCTGTACCCAGTGTTTTTGCTATGGGCATTCCGCCAGCTGCCACAGCTCTGGGGACTACAGTGTCCATAAAATCATCTCTGCC 630
 P Q G C T Q C F C Y G H S A S C H S S G D Y S V H K I I S A 210
 TTCCATCAAGATGTTGATGGCTGGAAGGCTGTCCAAAGAAACGGGTCTCCTGCAAAGCTCCAGTGGTCACAGCGCCATCGGGATATATTT 720
 F H Q D V D G W K A V Q R N G S P A K L Q W S Q R H R D I F 240
 AGCTCAGCACGACGATCAGACCCTGTCTATTTGTAGCTCCTGCCAAATTTCTTGGGAATCAACAGGTGAGCTACGGGCAAAGCCTATCT 810
 S S A R R S D P V Y F V A P A K F L G N Q Q V S Y G Q S L S 270
 TTTGACTACCGTGTGGATAGGGGAGGCAGACACCCATCTGCCCATGACGTGATCCTGGAAGGTGCTGGTCTACGGATCACAGCTCCCTTG 900
 F D Y R V D R G G R H P S A H D V I L E G A G L R I T A P L 300
 ATGCCACTTAGCAAGACACTGCCTTGTGGGATCACCAAGACTTACACATTAGATTAAATGAACATCCAAGCAGTAATGGAGCCCCCAG 990
 M P L S K T L P C G I T K T Y T F R L N E H P S S N W S P Q 330
 CTAAGTTACTTTGAGTATCGGAGGTTACTGCGGAACCTCACAGCCCTGCGGATCCGAGCTACCTACGGAGAATACAGTACTGGGTACATT 1080
 L S Y F E Y R R L L R N L T A L R I R A T Y G E Y S T G Y I 360
 GACAACGTGACCTTGATTTCAGCCCGCCCGTTCTGGAGCCCCAGCGCCCTGGGTGAACAATGTGTATGCCCTGTTGGCTACAAGGGG 1170
 D N V T L I S A R P V S G A P A P W V E Q C V C P V G Y K G 390
 CAGTTCTGCCAGGATTGTGCTTCCGGCTACAAAAGAGATTACGCCAGACTGGGACCTTTTGGCACCTGTATTCCATGTAAGTCCAAGGG 1260
 Q F C Q D C A S G Y K R D S A R L G P F G T C I P C N C Q G 420
 GGAGGGCCTGCGATCCAGACACAGGAGACTGTTACTCAGGGGATGAGAACCCTGACATCCCTGAGTGTGCTGACTGCCCCATTGGTTTC 1350
 G G A C D P D T G D C Y S G D E N P D I P E C A D C P I G F 450
 TACAACGATCCACAAGACCCCGCAGCTGCAAGCCGTGCCCCGTGCGCAATGGGTTCAGCTGCTCCGTGATGCCTGAGACAGAGGAGGTG 1440
 Y N D P Q D P R S C K P C P C R N G F S C S V M P E T E E V 480
 GTGTGCAATAACTGCCCCAGGGTGTCACTGGTGCCCGCTGTGAGCTCTGTGCTGATGGCTATTTTGGGGACCCCTTCGGGGAACTGGC 1530
 V C N N C P Q G V T G A R C E L C A D G Y F G D P F G E R G 510
 CCAGTGAGGCCTTGTGAGCCCTGTGAGTGAACAACAACGTGGACCCCTAGTGCCTCCGGGAACGTGTGACCGCCTGACAGGCAGGTGTCTG 1620
 P V R P C Q P C Q C N N N V D P S A S G N C D R L T G R C L 540
 AAGTGCATCCACAACACAGCTGGGGTCCACTGTGACCAGTGCAAAGCAGGCTACTATGGGGACCCGTGGCTCCCAATCCAGCAGACAAG 1710
 K C I H N T A G V H C D Q C K A G Y Y G D P L A P N P A D K 570
 TGTGAGCTTGCAACTGCAACCCAGTGGGCTCGGAGCCTGTGGAGTGTGCAAGTGTGAGCAGCTGTGTTGCAAGCCAGGCTTTGGTGGC 1800
 C R A C N C N P V G S E P V E C R S D G S C V C K P G F G G 600

FIG. 3A

CTCAGCTGTGAGCATGCGGCACTGACCAGCTGTCCAGCTTGCTATAATCAAGTGAAGGTTTCAGATGGATCAGTTTATGCAGCAGCTCCAG 1890
 L S C E H A A L T S C P A C Y N Q V K V Q M D Q F M Q Q L Q 630
 Dom. I/II
 ATCCTGGAGGCCCTGATTTTGAAGGCTCAGGTTGGAGCAGTACCCAACGCAGAGCTGGAAGGCAGGATGCAGCAGGCTGAGCAGGCCCTT 1980
 I L E A L I S K A Q G G A V P N A E L E G R M Q Q A E Q A L 660
 CGGGACATTCTGAGAGAAGCCAGATTTCACAAGATGCTGTTAGATCCTTCAATCTCCGGGTGGCCAAGGCAAGGACTCAAGAGAATAGC 2070
 R D I L R E A Q I S Q D A V R S F N L R V A K A R T Q E N S 690
 TACCGGGACCGCCTGGATGACCTCAAGATGACTGTGGAAAGAGTTCCGGGCCCTGGGCAGTCAGTATCAGAACCAAGTTTCAGGATACTCGC 2160
 Y R D R L D D L K M T V E R V R A L G S Q Y Q N Q V Q D T R 730
 AGGCTCATCACTCAGATGCGCCTGAGCCTGGAGGAAAGTGGAGCTTCCCTGCAAAACACCAACATTCTCTTCAGAGCACTACGTGGGG 2250
 R L I T Q M R L S L E E S E A S L Q N T N I P P S E H Y V G 750
 CCAAATGGCTTTAAAGTCTGGCTCAGGAGGCCACGAGATTGGCAGACAGCCATGTTTCAGTCAGCCAGTAACATGGAGCAACTGGCAAAG 2340
 P N G F K S L A Q E A T R L A D S H V Q S A S N M E Q L A K 780
 GAAACCCAGGAGTATTCCAAGAGCTGATGTCACTGGTGCAGGAGGCTCTGCAGGAAGGAGGCGGAAGCGGCAGCCTGGACGGAGCCGTG 2430
 E T Q E Y S K E L M S L V R E A L Q E G G G S G S L D G A V 810
 GTGCAAAGGCTTGTGGGAAATTCAGAAAATAAATCTCTGGCCCAGGAGTTGTGAGGGAGGCCACGCAAACCGACATGGAAGCAGAT 2520
 V Q R L V G K L Q K T K S L A Q E L S R E A T Q T D M E A D 840
 AGGTCTTATCAGCATAGTCTCCACCTTCTCAATTCCGTGTCTCAGATTCAAGGAGTCAATGATCAGTCCTTGCAGGTAGAAGCGAAGAGG 2610
 R S Y Q H S L H L L N S V S Q I Q G V N D Q S L Q V E A K R 870
 CTCAGACAAAAAGCTGATTCTCTCTCAAACCGTGTGACTAAGCATATGGATGAGTTCAAGCACGTGCAAAGCAATCTGGGAACTGGGAA 2700
 L R Q K A D S L S N R V T K H M D E F K H V Q S N L G N W E 900
 GAAGAAACCCGCGAGCTCTTACAGAATGGAAGAATGGGAGACAGACATCAGATCAGCTGCTTTCCCGTGCCAACCTTGCTAAAAGCAGA 2790
 E E T R Q L L Q N G K N G R Q T S D Q L L S R A N L A K S R 930
 GCCCAAGAAGCACTAAGTATGGGCAATGCCACTTTTTATGAAGTTGAGAACATCTTAAAGAATCTCAGAGAGTTTGACCTGCAGGTTGGA 2880
 A Q E A L S M G N A T F Y E V E N I L K N L R E F D L Q V G 960
 GATAAAAGAGCAGAAGCTGAAGAGGCCATGAAGAGACTCTCTACATCAGCCAGAAGGTTGCAGGTGCCAGTGACAAGACGAAGCAAGCA 2970
 D K R A E A E E A M K R L S Y I S Q K V A G A S D K T K Q A 990
 GAAGCAGCCCTGGGCAGTGCTGCTGCCGACGCCAGAGGGCAAAGAATGCAGCCAGGAGGCCCTGGAGATCTCTGGCAAGATAGAACAG 3060
 E A A L G S A A A D A Q R A K N A A R E A L E I S G K I E Q 1020
 GAGATAGGAGGTCTGAACCTTGAAGGCCAATGTGACAGCAGATGGAGCCTTGCCATGGAGAAGGGACTGGCCACTCTGAAAAGTGAGATG 3150
 E I G G L N L E A N V T A D G A L A M E K G L A T L K S E M 1050
 AGAGAAGTGGAAGGAGAGCTGTCAAGGAAGGAGCAGGAGTTTGACATGGATATGGACGCAAGTGCAGATGGTAATTGCAGAGGCCAAAGA 3240
 R E V E G E L S R K E Q E F D M D M D A V Q M V I A E A Q R 1080
 GTTGAAGACAGAGCCAAGAATGCTGGAGTTACGATCCAAGACACACTCAACACATTGGATGGCATCCTACACCTAATAGACCAGCCTGGC 3330
 V E N R A K N A G V T I Q D T L N T L D G I L H L I D Q P G 1110
 AGTGTGGATGAAGAGAGGCTGATCTTACTGGAGCAGAAGCTTTCCGAGCCAAGACTCAGATCAACAGCCAGCTACGGCCCTTGATGTCA 3420
 S V D E E R L I L L E Q K L F R A K T Q I N S Q L R P L M S 1140
 GAGCTGGAAGAGAGGGCACATCGGCAGAAGGGCCACCTCCGTTTCTGGAGACTAGCATAGATGGGATTCTGGCTGATGTGAAGAACCTG 3510
 E L E E R A H R Q K G H L R F L E T S I D G I L A D V K N L 1170
 GAGAACATCAGGGACAACCTGCCCCGGGCTGCTACAATACCCAGGCTCTTGAGCAACAGtgagctgccttagagatttctcaaccaag 3600
 E N I R D N L P P G C Y N T Q A L E Q Q * 1190
 gttcttgggattcagacctagctgccttagagatttctcaaccaaggttcttgggattcagacctcagggtcaggagcccgatgcggg 3690
 tggggtgggatgggaatatttgaatatgttgatgcgtgtgctcaggccccagtgaaacctgatcccatccctgagacctcggccagataa 3780
 atgtcttttattg 3789-3'

FIG. 3B

horse	1	MPALWLSYLCFSLPAAARATSGREVDCNKGSRQCIFDQELHKQTGNGFRCLNCNDNTDGIHCERCKAGFYRQRERDRCLPCNCNSKGSLSARCDNSG
man	1	MPALWLGCCILCFSLPAAARATSRREVDCNKGSRQCIFDRELHROTGTGNGFRCLNCNDNTDGIHCECKNGFYRHRERDRCLPCNCNSKGSLSARCDNSG
mouse	1	MPALWLSCCLGVALLLPASQATSRREVDCNKGSRQCIFDQELHRQAGSGFRCLNCNDNTAGVHCERSREGFYQHQSCKSRCLPCNCHSKGSLSAGCDNSG
horse	101	RCSCKPGVTGDRCDRCLPGFHTLTDAGCAQDQRLDLSKDCDDPAGISGPCDSGRVCVKPAVTGERCDRCRPGYVYHLDGGNPQGQTCFCYGHASCHSSG
man	101	RCSCKPGVTGARCDRCLPGFHTLTDAGCTQDQRLDLSKDCDDPAGIAGPCDAGRVCVKPAVTGERCDRCRSGYVYHLDGGNPEGCTQCFCYGHASCHSSA
mouse	101	QCRCKPGVTGQRCDQCQPGFHTLTDAGCTRDQDQRLDLSKDCDDPAGISGPCDSGRVCVKPAVTGERCDRCRPRDYHLDRANPEGCTQCFCYGHASCHASA
horse	201	DYSVHKIISAFHQDVVGWKA VQRNGSPAKLOWSORHRDISSARRSDPVYFVAPAKFLGNQOVSYGQSLSDFYRVDGRGRHPSAHDVILEGAGLRITAPL
man	201	EYSVHKITSTFHQDVVGWKA VQRNGSPAKLOWSORHQDVESSAQRLDPVYFVAPAKFLGNQOVSYGQSLSDFYRVDGRGRHPSAHDVILEGAGLRITAPL
mouse	201	DFSVHKITSTFSQDVVGWKA VQRNGAPAKLHW'SQRHRDVFESSARRSDPVYFVAPAKFLGNQOVSYGQSLSDFYRVDGRGRHPSAHDVILEGAGLRITAPL
horse	301	MPLSKTLPCGITKTYTFRLNEHPSSNWSQLSYFEYRRLRLNLTA LR-IRATYGEYSTGYIDNVTLISARPVSGAPAPWVEQVCPVGYKGQFCQDCASG
man	301	MPLGKTLPCGLTKTYTFRLNEHPSSNWSQLSYFEYRRLRLNLTA LR-IRATYGEYSTGYIDNVTLISARPVSGAPAPWVEQCICPVGYKGQFCQDCASG
mouse	301	MAPGKTLPCGITKTYTFRLNEHPSSNWSQLSYFEYRRLRLNLTA LR-IRATYGEYSTGYIDNVTLISARPVLGAPAPWVERCVCLLYGYKGQFCQECASG
horse	400	YKRDSARLQPFGTICPCNCGGGACDPDTGDCYSGDENPDIPEDACDPIGFYNDPQDRSCKPCPCRNFGSCSVMPETEEVVCNNCPQGVGTGARCELCA
man	400	YKRDSARLQPFGTICPCNCGGGACDPDTGDCYSGDENPDI-ECADCPIGFYNDPQDRSCKPCPCRNFGSCSVMPETEEVVCNNCPQGVGTGARCELCA
mouse	401	YKRDSARLGAFGACVPCNCQGGEGACDPDTGDCYSGDENPDI-ECADCPIGFYNDPQDRSCKPCPCRNFGSCSVMPETEEVVCNNCPQGVGTGARCELCA
horse	500	GYFGDPFGERGVPVPCQPCQCCNNNVDPASGNCNDRLTGRCLKCIHNTAGVHCDQCKAGYVYGDPLAPNADKCRACNCPNVGSEPVCECRSDGSCVCKPGFG
man	499	GYFGDPFGEHGPVPCQPCQCCNNNVDPASGNCNDRLTGRCLKCIHNTAGVHCDQCKAGYVYGDPLAPNADKCRACNCPNVGSEPVCECRSDGSCVCKPGFG
mouse	500	GYFGDPFGEHGPVPCQPCQCCNNNVDPASGNCNDRLTGRCLKCIHNTAGVYCDQCKAGYVYGDPLAPNADKCRACNCPNVGSEPVCECRSDGSCVCKPGFG
horse	600	GLSCEHAALTSCPACYNQVQVMDQFMQQLQILEALISKAQGG---AVPNAELEGQMQAQEAQRLDILREAQISQDAVRSFNLRVAKARTQENSRYDRDL
man	599	GPNCHEGAFS-CPACYNQVQVMDQFMQQLQRMALISKAQGGDG-VVPDTELEGQMQAQEAQRLDILREAQISQDAVRSFNLRVAKARTQENSRYDRDL
mouse	600	AFNCDDHAALTSCPACYNQVQVMDQFMQQLQLSLEALVSKAQGGGGGTVPVQLEGRIEQAQEAQRLDILGEAQISEGAMRAVAVRLAKARSQENDYKTRLD
horse	697	DLKMTVERVRALGSQYQNVQVQDTRRLITQMRSLSESEASLQNTNIPPSEHYVGPNGFKSLAQEA TRLDASHVQASNNMEQLAKETQEYSKELMSLVREA
man	697	DLKMTVERVRALGSQYQNVQVQDTRRLITQMRSLSESEASLQNTNIPASDHYVGPNGFKSLAQEA TRLDASHVESASNNMEQLTRETEDYSKQALSVRKA
mouse	700	DLKMTAERIRALGSQHQNVRQDTSRLISQMRLSLAGSEALLENTNIHSEHYVGPNDFKSLAQEA TRKADSHAESANAMKQLARETEDYSKQALSRLARKL
horse	797	LQE---GGSGSLDGA VVQRLVGKLQTKSLAQELSREATQTDMEADRSYQHSLLHNSVSIQGVNDQSLQVEAKR-LRQKADSLSNRVTKHMDFFKHVQ
man	797	LHEGVSGSGPDGA VVQGLVEKLEKTKSLAQQLTREATQAEIEADRSYQHSLLHNSVSIQGVNDQSLQVEAKRIRKQKADSLTLVTRHMDFFKRTQ
mouse	800	LSG---GGSGSWDSSVVQGLMGKLEKTKSLSQLSLEGTDADIEADRSYQHSLLHNSVSIQGVNDQSLQVEAKR-IRQKADSLSNLVTRQTDATFTRVR
horse	894	SNLGNWEBETRQLQNGKNGRQTSQDLSRANLAKSRAQEA LSMGNA TFYEVENILKNLREFDLQVGDKRAEAEAMKRLSYISQKVAGASDKTKQAEAA
man	897	KNLGNWKEEAQQLQNGKSGREKSDQLSRANLAKSRAQEA LSMGNA TFYEVESEILKNLREFDLQVGNRKA EAEAMKRLSYISQKVS DSDKTKQAEAA
mouse	897	NNLGNWEKETRQLQTKDRRQTSQDLSRANLAKNRAQEA LSMGNA TFYEVENILKNLREFDLQVEDRKA EAEAMKRLSSISQKVADASDKTKQAEATA
horse	994	LGSAAADAQRAKNAAREALEISGKIEIGGLNLEANVTADGALAMEKGLATLKSREVEVEGELSRKEQEFMDMDA VQMVIAEAQRVENRAKNAGVTIQ
man	997	LGSAAADAQRAKNGAGEALEISSEIEQISLNEANVTADGALAMEKGLASLKSREVEVEGELERKELEFDTNMDA VQMVITEAQKVDTRAKNAGVTIQ
mouse	997	LGSATADTQRAKNAAREALEISSEIEIGSLNEANVTADGALAMEKGTATLKSREMI-ELARKELEFDTKDVTQLVITEAQQADARATSAGVTIQ
horse	1094	DTLNTLDGILHLIDQPGSVDEERLILLEQKLFRAKTQINSQRLPMLSELEERAHQKGHRLFLSETSIDGILADVKNLENIRDNLPFGCYNNTQALEQQ
man	1097	DTLNTLDGILLMDQPLSVDEEGLVLEQKLSRAKTQINSQRLPMSLELEERARQQRGHLHLLSETSIDGILADVKNLENIRDNLPFGCYNNTQALEQQ
mouse	1096	DTLNTLDGILHLIDQPGSVDEEGMMLLEQGLFQAKTQINSRLPMLSDLEERVRRQRNHLHLLSETSIDGILADVKNLENIRDNLPFGCYNNTQALEQQ

FIG. 4